

**WISCONSIN ENDANGERED RESOURCES REPORT #126  
STATUS OF THE AMERICAN MARTEN IN WISCONSIN  
PERFORMANCE REPORT, 1 JULY 2002 THROUGH 30 JUNE 2003  
By Adrian P. Wydeven, Jane E. Wiedenhoeft, & James E. Ashbrenner**

**SUMMARY**

A total of 12 American marten were detected along 197.7 miles of survey, but all marten tracks occurred along the routes in the Marten Restoration Areas (139.2miles). Marten tracks included 11 along 79.5 miles in the Nicolet National Forest of northeast Wisconsin, and 1 along 59.7 miles in the Chequamegon National Forest of northwest Wisconsin. Rates of marten track observation were 1.7/100 miles in northwest Wisconsin and 11.3/100 miles in northeast Wisconsin. Marten detecting was especially poor in the Chequamegon, partially due to poor tracking conditions.

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PERFORMANCE REPORT**

July 1, 2002 - June 31, 2003

Prepared by Adrian P. Wydeven, Jane E. Wiedenhoef  
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Job 106.2.1 Monitor Population  
Job 106.2.2 Determine Recovery Levels  
Job 106.2.3 Enhance Population  
Job 106.2.4 Communications

Background: American marten (*Martes americana*), also known as pine marten, were listed as state endangered in 1972. Between 1975-1983, 172 martens were released in northern Forest County in the Nicolet National Forest of northeast Wisconsin. Between 1987-1990, 139 marten were reintroduced into the Clam Lake area of Ashland County in the Chequamegon National Forest in northwest Wisconsin. Marten were released into Fisher Management Units, where fisher (*Martes pennanti*) were reintroduced in the 1950's and the 1960's. These management units were closed to all terrestrial trapping of fur bearers and have been redesignated as Marten Restoration Areas (MRA). The MRA's cover 344 mi<sup>2</sup> in the Clam Lake area of northwest Wisconsin and 188 mi<sup>2</sup> in northeast Wisconsin. Standardized track surveys were initiated in 1987 in the Nicolet National Forest, and in 1991 in the Chequamegon National Forest.

A recovery plan was developed for the American (pine) marten in Wisconsin in 1986. The 4 jobs listed in this report represent main strategies for recovering marten populations in Wisconsin.

#### JOB 106.2.1 MONITOR POPULATION

Three routes of about 25-30 miles each were established in the two MRA's, and two additional routes were run periodically in northeast Wisconsin (Figures 1 & 2). Routes were followed slowly with four-wheel drive vehicles >8 and <24 hours after a fresh snowfall (Ashbrenner 1994). Tracks of individual marten, other carnivores and porcupines were recorded along each route.

#### Results and Discussion

Nine martens were detected along 79.5 miles of survey along routes 1-3 in the Nicolet National Forest, and two were detected along 58.5 miles of routes 4-6 (Table 1). Routes 1-3 and 6 were in the Marten Restoration Area, and 4 and 5 were east of the MRA. The overall observation rate for routes 1-3 was 11.3 marten/100 miles. This was the same as the rate in 2001.

Only one marten was detected along 59.7 miles in the Chequamegon National Forest (Table 2). Two surveys were conducted, but only one was conducted with good tracking snow. Days with good tracking snow were limited in winter 2002-2003. The overall rate of marten track observation was only 1.7/100 miles, and was the lowest rate ever detected for this area. We suspect that low detection rate may be mostly due to sampling error, but could indicate a decline in the local marten population.

The ratio of marten to fisher was 1 marten/ 8 fisher in the Chequamegon, and 1 marten/7.2 fisher in the Nicolet. In the past, the ratios have usually been close to 1 marten to 3 fisher. This index and the index of marten per 100 miles may indicate a decline in the marten population.

Based on analysis by J. Woodford (in preparation) core marten range continues to center around the two release areas with some slow expansion (Figure 3). Reports from state wildlife biologists indicate small populations may also exist in Douglas and Menominee counties. In winter 2003, 9 marten were detected along 10 survey miles in north-central Menominee County.

Other carnivores detected included coyote, bobcat, fox, wolf, dog, and otter. Other carnivores appear to be similar in abundance, but coyote and fisher may be more abundant in the Nicolet..

#### JOB 106.2.2 DETERMINE RECOVERY LEVELS

The Marten Committee met in May 2003. Jonathan Gilbert continued conducting research with GLIFWC on marten populations in the Clam Lake area including home range, habitat use and mortality assessment. John Wright of the U.S. Forest Service examined physiological parameters of marten and landscape interactions of martens in northwest Wisconsin. Kevin Russel of the University of Wisconsin - Stevens Point has proposed a two year study on marten mortality, survival, and dispersal in the Nicolet National Forest.

#### JOB 106.2.3 ENHANCE POPULATION

Ongoing research and monitoring are continuing to examine the viability of reintroduced populations and the potential for additional enhancement by additional reintroductions.

#### JOB 106.2.4 COMMUNICATION

American marten surveys were published in the Wisconsin Wildlife Surveys (Wydeven et al 2003), and marten observations were reported in Wisconsin Wildlife Surveys under "Rare Mammal Observations" (Wydeven and Wiedenhoeft 2003). Discussion of marten ecology and status was included with several talks including the following: talk to volunteer trackers in Wascott 2 November 2002; talk to volunteer trackers at Treehaven 7-8 December 2002.

#### Acknowledgement

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Table 1. Mammal track observations along marten survey routes in the Nicolet National Forest, winter 2002-2003.

Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
1/6/03	1	2"	29.2	2	24	19	3	2 Otter 1 Dog 4 Fox
1/6/03	2	2"	21.5	5	17	15	2	2 Wolf 1 Porcupine
1/19/03	3	1"	28.8	2	16	18	1	2 Otter 2 Fox 1 Porcupine
3/12/03	4	12"	29.3	0	12	9	1	2 Otter 3 Porcupine
1/26/03	5	2"	20.1	0	3	21	3	1 Fox 2 Porcupine
1/28/03	6A	8"	2.4	0	2	2	0	1 Fox
1/28/03	6B	8"	6.7	2	5	6	0	3 Fox 1 Porcupine
<b>Totals</b>			<b>138.0</b>	<b>11</b>	<b>79</b>	<b>90</b>	<b>10</b>	<b>6 Otter 1 Dog 11 Fox 2 Wolf 8 Porcupine</b>
Rate per 100 mi (1-3)			(79.5)	11.3	71.7	65.4	7.5	5.0 Otter 1.3 Dog 7.5 Fox 2.5 Wolf 2.5 Porcupine
2001-2002			(123.4)	11.3	51.9	77.0	12.2	2.4 Otter 3.2 Dog 10.5 Fox 4.9 Porcupine
2000-2001			(79.1)	25.3	58.2	49.3	8.8	1.3 Otter 7.6 Fox 3.8 Porcupine
1999-2000			(80.9)	12.4	23.5	32.1	2.5	4.9 Otter 1.2 Dog 3.7 Fox 3.7 Porcupine

Table 1. cont.

<b>Date</b>	<b>Miles Run</b>	<b>Number of Tracks Observed</b>				
		<b>Marten</b>	<b>Fisher</b>	<b>Coyote</b>	<b>Bobcat</b>	<b>Other</b>
1998- 1999	(79.4)	23.9	27.7	27.7	5.0	6.3 Otter 3.8 Fox
1997- 1998	(84.1)	11.9	26.2	41.6	2.4	3.6 Otter 2.4 Fox 3.6 Porcupine
1996- 1997	(76.2)	13.8	37.9	36.8	5.7	2.3 Otter 4.6 Fox 2.3 Porcupine

Table 2. Mammal track observations along marten survey routes near Clam Lake in the Chequamegon National Forest, winter 2002-2003.

Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
1/6/03	1		25.8	0	2	7	0	3 Otter 1 Fox 1 Porcupine
3/12/03	1	4"	33.9	1	6	3	3	5 Otter 3 Fox 2 Wolf
<b>Totals</b>			<b>59.7</b>	<b>1</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>8 Otter 4 Fox 2 Wolf 1 Porcupine</b>
Rate per 100 mi. (1)				1.7	13.4	16.8	5.0	13.4 Otter 6.7 Fox 3.4 Wolf 1.7 Porcupine
2001-2002 (2-3)			45.2	11.1	48.7	13.3	11.1	2.2 Dog 35.4 Fox 28.8 Wolf 2.2 Porcupine
2000-2001			94.4	19.1	59.6	11.7	6.4	6.4 Mink 1.1 Badger 8.5 Otter 19.1 Fox 21.3 Wolf 1.1 Porcupine
		1 & 3 only	(10.2)					
1999-2000			58.3	20.6	70.3	41.2	12.0	3.4 Mink 18.9 Otter 5.1 Dog 22.3 Fox 8.6 Wolf 3.4 Porcupine
1998-1999	None							
1997-1998			72.6	9.7	41.4	17.2	1.4	2.8 Dog 30.4 Fox 9.7 Wolf 1.4 Porcupine
1996-1997			76.2	17.1	56.4	10.5	2.6	1.4 Otter 23.2 Fox 7.1 Wolf 2.8 Porcupine